

ADAPTIVE MANAGEMENT PLAN

**STEVENS CREEK FISH PASSAGE TECHNICAL WORKING
COMMITTEE**

**STEVENS CREEK HYDROELECTRIC PROJECT
FERC No. 2535**

Prepared by:

**Dominion Energy South Carolina, Inc.
Cayce, South Carolina**

October 2023

**ADAPTIVE MANAGEMENT PLAN
FOR
THE STEVENS CREEK FISH PASSAGE TECHNICAL WORKING COMMITTEE**

TABLE OF CONTENTS

DEFINITIONS OF TERMS, ACRONYMS, AND ABBREVIATIONS.....	II
1.0 INTRODUCTION.....	1
1.1 Project Operations	2
2.0 STEVENS CREEK FPTWC.....	3
2.1 FPTWC Members	3
2.2 Budget/Resources	4
2.3 Committee Meetings	4
3.0 AMP MISSION AND OBJECTIVES	5
4.0 BASELINE DATA	6
5.0 TARGET SPECIES	7
6.0 IMPLEMENTATION.....	8
7.0 SCHEDULE.....	9
8.0 COMPLIANCE.....	10
9.0 REFERENCES.....	11

LIST OF TABLES

Table 7.1	AMP Implementation Schedule	9
-----------	-----------------------------------	---

LIST OF APPENDICES

Appendix A	Rules of Operation
Appendix B	Summary of Consultation

DEFINITIONS OF TERMS, ACRONYMS, AND ABBREVIATIONS

A

ADD Augusta Diversion Dam
AMP Adaptive Management Plan

B

BOD biochemical oxygen demand

C

cfs cubic feet per second
Commission Federal Energy Regulatory Commission
Conductivity a measure of the ability of water to pass an electrical current; impacted by the presence of inorganic dissolved solids as well as temperature

D

DESC Dominion Energy South Carolina Inc.; Licensee for the Stevens Creek Project
DO dissolved oxygen

F

FERC Federal Energy Regulatory Commission
FPTWC Fish Passage Technical Working Committee

G

GADNR Georgia Department of Natural Resources
GAEPD Georgia Environmental Protection Division

L

Licensee Dominion Energy South Carolina, Inc.

M

mg/L milligram per liter; used as a unit of measurement for DO and, in this case, ammonia, nitrate-nitrite, orthophosphate, phosphorus, and TKN
MW megawatt

N

NGO Non-Governmental Organization
NMFS National Marine Fisheries Service, housed within the U.S. Department of Commerce's National Oceanic and Atmospheric Administration
NSBLD New Savannah Bluff Lock and Dam

P

pH a term used to indicate the alkalinity or acidity of a substance as ranked on a scale from 1.0 to 14.0

Project Stevens Creek Hydroelectric Project, FERC No. 2535

R

RCG Resource Conservation Group

S

SCDHEC South Carolina Department of Health and Environmental Control

SCDNR South Carolina Department of Natural Resources

Study Plan Stevens Creek Water Quality Study Plan

T

Thurmond Dam J. Strom Thurmond Dam; also known as Clarks Hill Dam; built and managed by USACE

TKN Total Kjeldahl Nitrogen; the total concentration of organic nitrogen and ammonia

U

USACE U.S. Army Corps of Engineers

USEPA U.S. Environmental Protection Agency

USFS U.S. Forest Service

USFWS U.S. Fish and Wildlife Service

USGS U.S. Geological Survey

**ADAPTIVE MANAGEMENT PLAN
FOR
STEVENS CREEK FISH PASSAGE TECHNICAL WORKING COMMITTEE**

1.0 INTRODUCTION

Dominion Energy South Carolina, Inc. (DESC; Licensee) is the Licensee of the Stevens Creek Hydroelectric Project (Federal Energy Regulatory Commission [FERC] No. 2535; Project). The Project has an installed capacity of 17.28 megawatts (MW). It is located in Edgefield and McCormick counties, South Carolina, and Columbia County, Georgia, at the confluence of Stevens Creek and the Savannah River. The Project's dam (Stevens Creek Dam) is located approximately 13 miles downstream of the United States Army Corps of Engineers (USACE) J. Storm Thurmond Dam (Thurmond Dam). Additionally, two dams are located below the Project, upstream of the Savannah River's confluence with the Atlantic Ocean. These are the Augusta Diversion Dam (ADD), located 1 mile below the Stevens Creek Project, and the New Savannah Bluff Lock and Dam (NSBLD), approximately 20 miles downstream of the Stevens Creek Dam.

DESC is currently administrating a multi-year relicensing process for the Project, which is anticipated to culminate with the issuance of a new Project license by FERC on or before October 31, 2025. The relicensing has involved a cooperative effort between DESC and stakeholders, including state and federal resource agencies, non-governmental organizations (NGOs), and concerned citizens, to address the operational, recreational, and ecological resources associated with the Project. Diadromous fish passage within the Savannah River Basin has been a subject of review during the existing license term and the relicensing process. DESC's existing license for the Stevens Creek Project requires upstream fish passage following the construction of a fishway at the ADD. Fish are occasionally able to pass above the most downstream structure, the NSBLD, and utilize habitat and existing tributaries in the Savannah River; however, they cannot move beyond the ADD. The ADD is part of the Augusta Canal Project (FERC No. 11810), which is undergoing the licensing process and is anticipated to receive a fishway prescription. Fish passage at the NSBLD is also contingent on legal proceedings. The National Marine Fisheries Service (NMFS) has indicated that the agency will prescribe a fishway at the Stevens Creek Project under its new license as is authorized under Section 18 of the Federal Power Act. The United States Fish and Wildlife Service (USFWS) may also prescribe a fishway or file a reservation of authority.

Section 1

The Stevens Creek Fish Passage Technical Working Committee (FPTWC) was established during the relicensing with numerous federal and state agencies to work through fish passage at the Stevens Creek Project. This charter serves as the framework for the FPTWC to evaluate fish passage at the Stevens Creek Project and make decisions based on the best available information. This Adaptive Management Plan (AMP) framework will outline an implementation process for conducting studies to inform fish passage implementation at the Stevens Creek Project and collectively evaluate study results. DESC will continue to work with the FPTWC members to build the processes incorporated into this AMP for the new license term. Additionally, this AMP will operate based on the Rules of Operation, developed in coordination with the FPTWC and attached in Appendix A.

1.1 PROJECT OPERATIONS

The Stevens Creek Reservoir is approximately 25 miles long, extending upstream to the Thurmond Dam and 12 miles up Stevens Creek. The reservoir's surface area at normal full pond level (elevation of 187.5 feet) is 2,400 acres. The Project drainage area is approximately 7,173 square miles. DESC operates the Project to generate clean, renewable energy and re-regulate highly variable river flows discharged by the USACE from the Thurmond Dam. The Stevens Creek Project is operated in accordance with an Operating Plan on file with FERC. The plan was developed in consultation with the USACE, USFWS, GADNR, SCDNR, and the city of Augusta. The normal operating target range for the Stevens Creek Project is to provide an hourly discharge of ± 15 percent of the scheduled daily average discharge from the Thurmond Dam, if the actual discharge from the Thurmond Dam is within 500 cubic feet per second (cfs) of the scheduled discharge.

Section 2

2.0 STEVENS CREEK FPTWC

2.1 FPTWC MEMBERS

The FPTWC will meet within 120 days of license issuance to direct the implementation of the AMP. Members of the FPTWC will include state and federal resource agencies charged with managing aquatic resources within the Savannah River Basin, including: GADNR, GAEPD, NMFS, SCDHEC, SCDNR, USACE, USFS, and USFWS.

DESC will serve as chairperson of the FPTWC and be responsible for organizing meetings and distributing documents to committee members. Each entity will have the opportunity to select a representative to the FPTWC from within their organization. As noted within the Rules of Operation (Appendix A), the FPTWC may elect, by unanimous consent, to invite other entities to attend meetings of the FPTWC when their participation provides value to the subject(s) at hand. These attendees are not considered voting parties to the FPTWC for the purposes of consensus. The establishment of the FPTWC cannot usurp any regulatory authority from any of the participating agencies.

The FPTWC will ultimately work to guide the decision-making processes specified in this AMP. The FPTWC will not make decisions that supersede state or federal law. The FPTWC's responsibilities may include, but are not limited to:

- Evaluating baseline information and study plans;
- Providing overall guidance for the adaptive management process;
- Evaluating other study information (i.e., existing) or information that becomes available during the time period of evaluations and would be applicable to this charter;
- Establishing and documenting the goals and objectives of each action undertaken as part of this charter and advising when modifications to metrics used for evaluation purposes are needed;
- Reviewing and considering long-term impacts of operational modifications on the Stevens Creek Project and economics at the Stevens Creek Project when evaluating the feasibility of implementing structures;
- Advising on modifications to this charter to be presented to FERC and advising if any amendment action is necessary during the license.

Section 2

2.2 BUDGET/RESOURCES

The responsibility for implementation of this AMP will rest primarily with DESC as Licensee for the Stevens Creek Project. Annual budgets will be developed by DESC relative to the monitoring and study costs as well as administrative costs and expenses. DESC will also rely on other resources outside its establishment, as outlined in the Rules of Operation.

2.3 COMMITTEE MEETINGS

The FPTWC is initially scheduled to consult twice per year via a meeting or conference call. The frequency of meetings may be adjusted based on need. The tentative schedule is provided in Section 7.0 of this plan. Minutes from each meeting, as well as any pertinent materials discussed in the meetings, will be filed with FERC as an appendix to the annual report of AMP activities, as described in Section 8.0.

DRAFT

Section 3

3.0 AMP MISSION AND OBJECTIVES

The mission of the Stevens Creek FPTWC is to work adaptively to implement and manage safe, timely, and effective fish passage during the new license term. The measures employed under this AMP to achieve the AMP mission are described in Section 6.0, and the scope of this AMP is limited to the implementation of those measures.

The general objectives of this AMP are as follows:

- Maintain effective communication regarding Savannah River Basin studies and passage implementation during the new license term.
- Review alternative options regarding Stevens Creek Project operations or modifications to facilitate fish passage and habitat needs for target species.
- Develop study plans and execute studies agreed to by the FPTWC.
- Review study results and determine the next steps for safe, timely, and effective upstream passage design.
- Provide technical assistance for the adaptive management of fish passage facilities.
- Review the need for safe, timely, and effective downstream fish passage.

Section 4

4.0 BASELINE DATA

As part of relicensing, DESC collected existing information and developed several studies in consultation with the Water Quality, Fish, and Wildlife Resource Conservation Group (RCG), which was established with interested stakeholders to address Stevens Creek Project issues related to aquatic and terrestrial resources. The existing information was summarized in the Aquatic Habitat Whitepaper developed by DESC and was submitted to stakeholders for review and comment. The paper's intent was to assist DESC, resource management agencies, and other interested entities in understanding the aquatic resources surrounding the Stevens Creek Project as it relates to fish passage goals, diadromous fishes in the region, and the baseline aquatic environment. The FPTWC will use the information in the Aquatic Habitat Whitepaper to inform data gaps for the development of the study plan. Additional literature and information will be reviewed and included in the decision-making process for fish passage at the Stevens Creek Project, as identified by members of the FPTWC.

Section 5

5.0 TARGET SPECIES

Target species through this charter include American eel, *Anguilla rostrata*; American shad, *Alosa sapidissima*; and blueback herring, *Alosa aestivalis*.

The initial management objectives are for American eel and American shad at the time of this AMP. Species of interest may also include robust redhorse, *Moxostoma robustum*, as appropriate in consultation with the USFWS.

DRAFT

Section 6

6.0 IMPLEMENTATION

The FPTWC will work together to further develop the framework for implementing this AMP to address fish passage during the new license term. This AMP will generally follow the following steps and may be modified as appropriate:

Step 1 (Issuance of the License) - DESC will work with the FPTWC to review information necessary to inform surveys for target species conducted post-license. The FPTWC, through its decision-making procedures, will develop studies to understand existing conditions at Stevens Creek Dam.

Step 2 – Implement study plans developed during Step 1. Studies may be repeated or curtailed as determined necessary.

Step 3 – DESC will work cooperatively with FPTWC to implement timely passage of target species at the Stevens Creek Dam, as determined appropriate, and coordinate the implementation of passage effectiveness studies.

Step 4 – The FPTWC will continue to meet and inform adaptive management objectives as determined appropriate through the decision-making procedures.

Section 7

7.0 SCHEDULE

The AMP schedule is described in the table below in relation to the issuance of the license by FERC. The dates below are targets and are subject to AMP member availability and request, as discussed in the Rules of Operation.

TABLE 7.1 AMP IMPLEMENTATION SCHEDULE

Period	Item
Within 90 days of license issuance	Submit Final Fish Passage Technical Working Committee (FPTWC) Adaptive Management Plan (AMP) to FERC
120 days of license issuance	Meet with FPTWC and review the AMP
Year 1 of new license	<ul style="list-style-type: none"> • Implementation of AMP • FPTWC annual meeting February of following year • File Annual Report with FERC – April 30th after the FPTWC meeting
Year 2 of new license	<ul style="list-style-type: none"> • Implementation of AMP • FPTWC annual meeting February of following year • File Annual Report with FERC – April 30th after the FPTWC meeting
Year 3 of new license	<ul style="list-style-type: none"> • Implementation of AMP • FPTWC annual meeting February of following year • File Annual Report with FERC – April 30th after the FPTWC meeting
Year 4 of new license	<ul style="list-style-type: none"> • Implementation of AMP • FPTWC annual meeting February of following year • File Annual Report with FERC – April 30th after the FPTWC meeting
Year 5 of new license	<ul style="list-style-type: none"> • Implementation of AMP • FPTWC annual meeting February of following year • File Annual Report with FERC – April 30 of following year
Year 6, continued through the term of the new license.	<ul style="list-style-type: none"> • Ongoing consultation with FPTWC and implementation of the AMP as determined appropriate by studies and other measures implemented through this AMP.

Section 8

8.0 COMPLIANCE

Compliance will be based on following the schedule in Section 7.0 and submission of an annual AMP report each year to FERC. The annual report will summarize all AMP activities during the previous year. The report will be made available to appropriate entities for review and comment at least 30 days prior to being submitted to FERC. All comments on the report, pertinent correspondence, and FPTWC meeting minutes will be appended to the annual report.

DRAFT

Section 9

9.0 REFERENCES

[Placeholder for final AMP development]

DRAFT

APPENDIX A

RULES OF OPERATION

(TO BE FILED WITH THE FINAL AMP)

APPENDIX B

SUMMARY OF CONSULTATION

(TO BE FILED WITH THE FINAL AMP)